Bay Mills Indian Community
Biological Services Newsletter

FEBRUARY 2016 ISSUE 2

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Staff Changes

Frank Zomer

Inland Fisheries and Wildlife Technician

Frank grew up in Reed City, MI and received a Bachelor of Science degree in Fisheries and Wildlife Management from Lake Superior State University in 2008. Frank has previously worked for the Minnesota Conservation Corps, Bureau of Land Management, Montana Department of Fish, Wildlife and Parks, Minnesota Department of Natural Resources, Oregon Department of Fish and Wildlife, and Bay Mills Indian Community. He began his new position with Bay Mills Indian Community in early February as the Inland Fisheries and Wildlife Technician.

In the News: Didymo

Didymo (*Didymosphenia geminata*), more commonly known as rock snot, is a new topic surrounding the St. Marys River. Didymo is a freshwater algae which thrives in cold, low nutrient waters. While this algae has been found in Lake Superior for several decades, the nuisance blooms of the St. Marys River are new.

Didymo has been found in Pendill's Creek, west of Bay Mills, in addition to the St. Marys River rapids. No blooms have been discovered on BMIC land to date, but the possibility exists for the spread of this species. Please contact the BMIC Biological Services Department if a population of this algae is found.

While Didymo does not result in human health issues, the thick algal mats alter stream ecosystems and harm native species. The spread of this algae can be prevented by:

- Cleaning waders, gear, boats, etc. using soapy water, bleach, or peroxide. Dry equipment for 48 hours or freeze for 24 hours.
- Do not use felt waders

Above: Didymo
Photo credit: Michigan.gov

Fisheries

The 2015 Season was a success for the Bay Mills Fisheries Staff. The staff conducted all of their annual assessments and were able to collect biological data from commercial fishers in all months of the year. The Bay Mills Fisheries staff once again has a busy assessment lineup for 2016. The staff will be conducting their usual fishery assessments such as:

- Spring lake trout assessment
- Pre-recruit lake whitefish surveys
- Waishkey Bay fish community assessment project
- Lake whitefish assessment project

In addition to the annual assessments, the fisheries staff will be conducting two additional surveys in 2016.

- Lake Sturgeon Population Assessment

⇒ Staff will assist the US Fish and Wildlife Service with a Lake Sturgeon population survey in Whitefish Bay during mid-June.

- Juvenile coregonid assessment using beach seines

⇒ Staff will conduct beach seine hauls in hopes to capture juvenile coregonid species (lake whitefish, round whitefish and lake herring among other species) in order to assess juvenile abundance of these targeted species. This assessment will take place in July at various sites within Whitefish Bay as well as west of Whitefish Point.

If you have any questions about the fisheries program, please contact Assistant Fisheries Biologist, James Osga at (906)248-8653 or josga@baymills.org.

Above: Staff members hauling gear during annual lake whitefish assessment survey.

Above: Halfaday Creek site during the spring of 2015.

Fish Movement Project

BMIC Biology and Lake Superior State University performed a collaborative research project in Whitefish Bay tributaries that lasted from April 2015 into January 2016. The objectives of the study were to characterize movement patterns of fish in and out of tributaries as well as assess the health of migratory and resident fishes. Fyke nets were set back-to-back to catch fish moving upstream and downstream. Captured fish were measured, recorded and then released back into the river. Over 12,000 fish were caught, encompassing 32 different species. Fish were tested for the presence of select viral and bacterial strains as well as the overall health at the time of capture. Additional sampling will take place this spring. Results will be published and available to the public after completion of the study. Questions about this study can be directed to Frank Zomer, Inland Fish and Wildlife Technician 906-248-8654, fzomer@baymills.org.

Inland Fish & Wildlife

This past fall, our Inland Biologist (Emily) assisted with assessments conducted by other Michigan tribes, including a walleye assessment on Brevoort Lake with the Sault Ste. Marie Tribe and a lake sturgeon assessment on Burt Lake with Little Traverse Bay Bands of Odawa Indians. During the elk hunt, she accompanied Bay Mills Conservation to become more familiar with the area and the elk registration process and she assisted at the Atlanta elk check station during the December hunt period. Our goal is to have inland staff available to check elk in the field for Bay Mills hunters during the 2016 elk season. We are considering running deer and bear check stations at our office in 2016 and welcome feedback on this idea!

In addition to plans for elk, bear, and deer registration, our wildlife activities for 2016 include waterfowl surveys, waterfowl and osprey nesting structure monitoring, examining cormorant diets, and trail camera surveys. Currently, there is an ongoing trail camera survey within the Wetland Preserve and surrounding areas. Examples of wildlife seen on trail camera surveys since July are: white-tailed deer, coyote, red fox, skunk, porcupine, bobcat, and snowshoe hare. We also have plans for fisheries and aquatic surveys, such as frog/toad surveys, wild rice monitoring, stream fish surveys, Spectacle Lake fish surveys, and a walleye assessment on Monocle Lake. Now that there are two staff members in the Inland program, we are looking forward to developing new projects and collaborating on existing projects in our region.

Please contact Emily Martin (248-8651; emartin@baymills.org) if you have any questions about the Inland program.

Above: Coyote from trail camera survey.

Above: Red fox from trail camera survey.

Above: Lake sturgeon captured during the Burt Lake assessment.

Featured Invasive Species: Scots Pine

Background

Scotch/Scots pine (*Pinus sylvestris*) is a native of Eurasia which has been introduced throughout the Great Lakes region. Since it has been widely planted, it is now overlooked by many as just another native tree. However, Scots pine is not native, and can cause a variety of problems for native plant species. Some examples include:

- Displacement of native species
- Increased spread of diseases
- Degraded habitat for native species, such as nesting birds

Identification

Scots pine can be hard to distinguish from native pine species while young, but identification is much easier once the tree matures. Some of the key characteristics are listed below:

- 1-4" needles occur in bunches of two and are twisted (**see right**).
- Bark on branches and upper stem are orange. This is especially prominent in mature trees
- Cones do not curve toward end of branches as Jack pine cones do.

Above: Scots pine needle

Control

While Scots pine can be controlled by herbicides, pulling seedlings by hand and cutting down mature trees works just as well without the use of harmful chemicals. The pine cones should also be raked up and removed or burned to prevent reproduction.

Please contact Wes Parish at (906) 248-8647 or waparish@baymills.org with questions or for advice.

Replacement

When removing Scots pine, it is always a good idea to replace the trees with native trees to block wind and replace the aesthetics of the old tree. Native trees which serve as great replacements include:

- White Pine (*Pinus strobus*)
- Red Pine (*Pinus resinosa*)
- Jack Pine (*Pinus banksiana*)

Above: Straight Scots pine cones.

Below: Curved Jack pine cones.

Below: Orange bark on mature Scots pine.

Invasive Species News

Invasive Cattails Project

Narrowleaf cattail (*Typha angustifolia*), an invasive species which competes and hybridizes with native cattails, has formed an extensive patch which spreads from Bay Mills Resort and Casino to the Brimley bridge. Approximately seven of the fourteen acres of this patch are located on BMIC land. BMIC Biological Services worked in coordination with Loyola University Chicago to control this infestation in recent years using both mechanical and chemical control methods. A large portion of the cattail waste was transported to West campus for conversion to pellet for woodstoves. This is the first year of such efforts, and will hopefully continue in future years.

Purple Loosestrife Found On Reservation

The highly-invasive plant purple loosestrife (*Lythrum salicaria*) was discovered for the first time on BMIC land, outside of Sugar Island, in 2015. Only a single plant was found, and it was promptly removed by BMIC Biological Services staff. Purple Loosestrife grows in moist areas, can reach 6 feet in height. This plant can be identified by its purple flower spikes and flowers with 5-7 petals. If anyone suspects they have found purple loosestrife on BMIC land, please contact Wes Parish at (906) 248-8647 or waparish@baymills.org.

Above: Invasive Watermilfoil near Bay Mills Resort and Casino.

Above: Cattail ready for conversion into pellet fuel (pellet-making machine in background).

Far left: The purple loosestrife plant found on BMIC land this past summer.

Eurasian Watermilfoil

Eurasian watermilfoil was discovered in 2014 in the embayment near Bay Mills Resort and Casino. Chemical treatment has been applied in the past, but this plant is almost impossible to eradicate completely and requires constant attention to be controlled. The main goal until recently has been preventing the population from spreading into Back Bay.

In an effort to control this population, BMIC Biological Services staff contacted the Les Cheneaux Watershed Council (LCWC). LCWC has successfully utilized a native biological control fungus in recent years, and was eager to share their expertise. Samples of the native fungus were collected from the patch near the casino and sent to a laboratory for propagation. BMIC Biological Services staff plans to work closely with LCWC this spring to place the fungus in the area of invasive watermilfoil with the hope of a successful control project.

In the meantime, everyone can do their part to help prevent the spread of Eurasian watermilfoil and other aquatic invasive species by cleaning boats and equipment regularly, especially when transporting from one waterbody to another or in and out of the infected embayment area.

Community Bike Program

The community bike program, a partnership between the BMIC Biological Services Department and the Mukwa Health and Fitness Center, was started in 2012 with the goal of reducing greenhouse gas emissions in the community. Mileage is tracked by simple bicycle computers and is then converted to kilograms of carbon dioxide reduced.

This program is open to all members of the community free of charge! In order to use a bike, just stop by the Mukwas Fitness Center, fill out a brief contact form, and ride away. Some new changes are coming in 2016:

1. Four new bikes were purchased (2 tandem bikes and 2 adult trikes).
2. Bikes may be checked out for a month rather than the previous period of two weeks. If bikes are still available, you may check the bike out again immediately.

Be sure to check a bike out in 2016 and help protect our air. Program will begin in April or May and continue through October or November.

Above: Two of the new bikes for the program.

Fluorescent Bulb Crusher

Below: Fluorescent bulb crushing machine in BMIC Maintenance building.

This machine funded by: Great Lakes Restoration Initiative

Mercury has made headlines many times in recent years. This neurotoxin is released into the environment during combustion of fossil fuels, mining processes, waste incineration, cement production, and several other industrial processes. This toxin then builds up in animals, most notably fish, and then enters our bodies when animal products are consumed. A possible resource produced by CORA can be found at: http://www.1836cora.org/documents/EatFishWisely.pdf

One source of mercury contamination that we can all help prevent from entering the environment is fluorescent bulbs. These bulbs help protect the environment by conserving electricity, but must be properly disposed of as they contain mercury. The BMIC Biological Services Department purchased a fluorescent bulb crusher in late 2015 for use by the BMIC Maintenance Department. The machine has already been put to use on fluorescent lights from various community buildings. However, this machine is also available for public use. Just drop off any type of fluorescent bulbs at the Maintenance building and they will be properly disposed of for free.

REMINDER: BMIC Biological Services Department plans to continue household hazardous waste collections during spring and fall clean-ups in future years. Reminders will be posted in several community buildings and an all-users email will be sent prior to collection dates. These collection events are free of charge and are a great way to keep harmful chemicals from entering the environment!

Water Quality

Erosion

Erosion, one of the main sources of water pollution, is present in several areas along the community beach. One of the major erosion areas is located near Bay Mills Community College. The best method of controlling erosion is removing invasive species with shallow root systems and transplanting native species with much more robust root systems.

Efforts began in 2014 when BMCC students planted native beach grass in the area. The plants survived the harsh winter and encouraged BMIC Biological Services staff to continue transplanting native beach grass in 2015. Approximately 3,600 square feet of grass has now been planted, and large quantities of the invasive spotted knapweed plant were also removed to reduce competition for native species.

Above: Classic taproot of spotted knapweed offers very little erosion control. Photo credit: Driftless Prairies.

Above: Extensive mat of beach grass is extremely effective in controlling erosion. Photo credit: University of Delaware, College of Earth, Ocean, and Environment.

Right: Plastic microbeads used in hygienic products. Photo credit: National Public Radio.

President Obama approved a bill in December banning the use of plastic microbeads in hygienic products such as shampoo, toothpaste, and facewash by July 1, 2018.

Left: BMCC beach erosion.

Left: Beach grass transplanted by BMCC students (foreground). ATV tracks are a main source of erosion.

Microplastics

A relatively new and troublesome topic surrounding the Great Lakes is that of microplastics (plastic particles smaller than 5 mm). These particles enter the environment through plastic production processes and spills, the breakdown of plastic pollution, fibers from clothing, and the use of cosmetics, hygienic products, and cleaners containing plastic microbeads. Microplastics are easily consumed by organisms, causing nutritional issues, and work their up the food chain. Research is still in the early stages, but many health concerns have been raised as a result of these particles. There are a variety of ways to prevent these microplastics from entering the environment:

- Reduce use of plastic materials (use cloth shopping bags, a reusable water bottle, etc.)
- Recycle
- Stop using cosmetics and cleaning products containing microbeads. An internet search will help and there is even a “Beat the Microbead“ App. However, if a product contains polyethylene or polypropylene or contains the word “scrub” or “exfoliating,” it probably contains plastic microbeads.
- Pick up trash and do not litter

Community Outreach

Bay Mills Community College

In September, the BMCC "Introduction to Natural Resource Management" class helped BMIC Biological Services staff pull invasive spotted knapweed near the college. The class also planned to set up quadrats and determine the population density of spotted knapweed. Unfortunately a thunderstorm cut the activities short, but several bags were filled in just a short time showing what teamwork can accomplish.

Below: Bay Mills Community College and BMIC Biological Services staff hurry to wrap up a section while storm clouds roll in.

Ojibwe Charter School

BMIC staff helped the Great Lakes Indian Fish and Wildlife Commission during an educational day with the Ojibwe Charter School in September. Following activities at Monocle Lake, BMIC staff discussed wild rice with the students at Spectacle Lake. The students then had the opportunity to use the Department's canoe and waders to get a closer look at the wild rice.

Above: OCS students take a closer look at wild rice in Spectacle Lake.

Waishkey River Watershed Management Plan

The Waishkey River Watershed Management Committee was created in 2015, with the goal of protecting and restoring the ecological integrity of the Waishkey River. Interested citizens are encouraged and welcomed to attend meetings and offer advice and knowledge to help with the writing of a Management Plan. The next meeting date has not been set, but please contact Matt Konieczki at mkonieczki@baymills.org or (906) 248-8652 or Brian Wesolek at bwesolek@baymills.org or (906) 248-8648 for meeting dates or more information.

Adopt-a-Beach Program

The BMIC Biological Services Department is planning to begin an Adopt-a-Beach program for the BMIC beach in 2016. Four segments, each approximately 1/2 mile, are planned. Signs with names will be posted near each section, and volunteers will also be offered invasive-species training if desired. If you are interested, please contact Matt Konieczki at mkonieczki@baymills.org or (906) 248-8652.

*Clubs/Organizations will be given preference.

Bay Mills Indian Community
Biological Services

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